

Phenomena of Jupiter's Satellites observed at Stonghurst in 1883. By the Rev. S. J. Perry, F.R.S.

1883, Jan. 3	Satellite.	Phenomena.	G.M.T.		Corr. of N.A.	Observer.	Remarks.
			h	m s			
20	II.	Tr. E. Internal contact	5	35	20.9	J.R.	Definition fair. Haze.
		Bisection	37	48.0			
		External contact	40	7.3			
Feb. 11	I.	Oc. D. External contact	5	40	19.8	J.R.	Definition poor. Haze.
		Last seen	43	45.3			
	I.	Tr. I. External contact	8	22	44.0	W.McK.	Good.
11		Bisection	26	38.0			
		Internal contact	29	47.5			
12	I.	Tr. E. Internal contact	10	39	52.9	W.McK.	Difficult. Haze.
		Bisection	43	47.9			
		External contact	47	0.4			
16	I.	Oc. R. First seen	8	59	14.7	W.McK.	Very satisfactory.
		Half light	9	0	36.1		
		Full light	1	55.9			
16	III.	Oc. R. First seen	7	1	23.6	W.McK.	Good. Haze.
		Bisection	4	36.1			
		External contact	7	4.1			

	Satellite.	Phenomena.	G.M.T. h m s	Corr. of N.A.	Observer.	Remarks.
Feb. 16	III.	Ec. D. Losing light	9 6 52.6		W. McK.	Excellent.
		Half light	9 24.6			
		Last seen	15 54.6	+ 2 34.6		
16	II.	Oc. D. External contact	11 53 6.1		W. McK.	Haze at beginning. Very good
		Bisection	55 45.1			at end.
		Last seen	59 33.6			
16	III.	Ec. R. First seen	11 53 25.6	— 47.4	W. McK.	"
		Full light	58 25.1			
18	II.	Tr. I. External contact	6 24 46.5		W. McK.	Very good.
		Bisection	26 46.0			
		Internal contact	28 12.7			
Mar. 4	II.	Tr. I. External contact	11 27 55.0		W. C.	Definition very poor.
		Bisection	29 43.1			
		Internal contact	31 14.5			
5	I.	Oc. D. External contact	11 11 31.2		W. C.	Definition fair.
		Bisection	13 15.4			
		Last seen	14 46.7			
7	I.	Ec. R. First seen	9 15 48.5	— 8.5	S. P.	Very good.
		Half light	17 16.2			
		Full light	18 36.0			

	Satellite.	Phenomena.	G.M.T. h m s	Corr. of N.A.	Observer.	Remarks.
Mar. 12	I.	Oc. D. Bisection	13 8 38.4		W.C.	Definition very bad. Haze.
		Last seen	9 50.4			
13	III.	Tr. E. External contact	8 54 35.1		J.R.	Definition good. Clouds passing.
14	I.	Oc. D. External contact	7 36 54.0		W.C.	Good.
		Bisection	38 50.5			
		Last seen	40 26.3			
14	I.	Ec. R. First seen	11 11 46.9	+ 0.9	W.C.	Good.
		Half light	12 52.4			
		Full light	17 12.9			
31	II.	Ec. R. First seen	8 35 27.9	+ 13.9	W.C.	Good.
		Half light	37 11.8			
		Full light	38 46.8			
31	III.	Ec. D. Fading	9 12 28.3		W.C.	Very good.
		Half light	15 21.6			
		Last seen	19 1.2	+ 2 20.2		
31	III.	Ec. R. First seen	12 3 33.1	- 1 15.9	W.C.	Good.
		Half light	6 46.7			
		Full light	9 41.7			

Satellite.	Phenomena.	G.M.T. h m s	Corr. of N.A.	Observer.	Remarks.
April 4	IV.				
	Ec. D. Fading	9 29 22.7		S.P.	
	Last seen	53 0.4	+ 19 6.4		Very unsatisfactory. The thin cloud over <i>Jupiter</i> seemed to absorb the light of IV. more than that of I, II., or III.
4	IV.			S.P.	Good. Cloudy half a minute later, when IV. still very faint.
6	I.			W.C.	Fair.
	Oc. D. External contact	7 56 33.8			
	Bisection	58 3.8			
	Last seen	8 0 9.3			
6	I.			W.C.	Definition very bad.
	Ec. R. First seen	11 28 22.8	+ 19 8		
	Half light	29 38.7			
	Full light	30 29.2			
7	III.			W.C.	Definition very good. Hazy.
	Oc. D. External contact	8 12 49.5			
	Bisection	17 24.6			
	Last seen	21 29.9			
12	IV.			S.P.	Good. Twilight strong.
	Tr. I. External contact	7 23 44.1			
	Bisection	33 42.4			
	Internal contact	47 32.1			
12	IV.			S.P.	Limb fair.
	Tr. E. Internal contact	8 37 54.0			Observation difficult.
	Bisection	45 40.5			
	External contact	55 0.8			

Satellite.	Phenomena.	G.M.T. h m s	Corr. of N.A.	Observer.	Remarks.
Apr. 15	I. Ec. R. First seen Half light Full light	7 51 32.4 53 7.9 54 44.9	- 1 0.6	W.C.	Passing clouds. Planet very faint at times.
May 6	III. Ec. R. First seen Half light Full light	8 10 32.9 13 2.4 15 25.2	- 1 15.1	S.P.	Good. Twilight strong.
16	II. Oc. D. External contact Bisection Last seen	9 4 1.9 5 18.4 11 22.7		W.C.	Planet very unsteady.
Oct. 5	IV. Ec. D. Fading Half light Last seen	15 41 7.2 45 14.2 49 20.6		W.C.	Excellent.
5	I. Ec. D. Fading Half light Last seen	16 18 32.1 19 48.6 21 1.4	+ 8 6.6  + 48.4	W.C.	Excellent.

Stonyhurst Observatory:  
1884, Jan. 23.

*Observations of Occultations of Stars by the Moon and of Phenomena  
Francisco, and at Table Mount Station,*

*(Communicated by*

*Occultations of Stars*

Observed at the *Davidson Observatory*, San

Latitude  $37^{\circ} 47' 24''$ . Longitude  $122^{\circ} 25' 37''$  W.

No.	Date.	Star.	Estim. Mag.	Phase, Im. or Em.	Obser- ver.	Telescope. Aper. Power.	Chronometer.
						inches. diams.	
1	<sup>1881.</sup> June 11	?		Im.	G.D.	6.4 ?	Sid. 223
2		$\epsilon^2$ Ophiuchi		"	"	6.4 ?	"
3	<sup>1882.</sup> Mar. 23	$\omega^2$ Tauri	$5\frac{1}{2}$	Im.	C.B.H.	3.0 105	Sid. 223
4	28	A' Cancr	6	"	"	6.4 30	"
5	29	$\omega$ Leonis	$5\frac{1}{2}$	"	"	6.4 30	"
6	Apr. 19	Jupiter		"	J.S.L.	6.4 120	"
7		"		"	J.J.G.	3.0 105	Sid. 207
8		"		"	"	"	"
9	20	?	8	"	C.B.H.	3.0 105	Sid. 223
10	28	$\epsilon$ Leonis	$4\frac{1}{2}$	"	F.M.	6.4 ?	"
11	May 19	?	7.5-8	"	C.B.H.	6.4 95	"
12		?	7.5-8	"	"	"	"
13		?	9-10	"	"	"	"
14		?	$8\frac{1}{2}$	"	"	"	"
15		?	8	"	"	"	"
16		?	7.5-8	"	"	"	"
17		?	8.5	"	"	"	"
18		?	8-8.5	"	"	"	"
19	June 19	B.A.C. 3202?	7	"	"	"	Sid. 207
20	20	19 Sextantis	$6\frac{1}{2}$	"	"	3.0 105	"
21	21	55 Leonis	6	"	F.W.	6.4 30	"
22		"	6	"	C.B.H.	3.0 105	M. 7,4969
23		57 Leonis	7	"	F.W.	6.4 30	Sid. 207
24		"	7	"	C.B.H.	3.0 105	M. 7,4969
25	Oct. 17	?	$7\frac{1}{2}$	"	"	6.4 95	M. 7,2256
26		?	9-10				
27		?	8				
28		?	$7\frac{1}{2}$ -8				
29		?	$7\frac{1}{2}$ -8				
30		?	8-8 $\frac{1}{2}$				
31		?	8				

There is no explanation of the